

WHAT IS CLAIMED IS:

1. A patch antenna comprising:

a main body including a dielectric substrate in which a
5 patch electrode is provided on one principal surface thereof
and a ground electrode is provided on the other principal
surface thereof, two feeding points being provided in the
patch electrode;

a circuit for generating a phase difference of 90°
10 between high-frequency signals supplied to the two feeding
points through a pair of output terminals connected to the
two feeding points; and

a Wilkinson distribution circuit including a pair of
output terminals connected to the 90° -phase-difference
15 generating circuit,

wherein an input terminal of the Wilkinson distribution
circuit is connected to a feeder line so that the main body
radiates a circularly polarized radio wave.

20 2. The patch antenna according to Claim 1, wherein the
Wilkinson distribution circuit comprises:

a junction;

two parallel-connected line conductors connected to the
junction, each line conductor having an electric length of
25 about $\lambda/4$ and a characteristic impedance substantially equal
to $\sqrt{2 \times Z_1 \times Z_2}$, wherein Z_1 is an input impedance of the
Wilkinson distribution circuit, Z_2 is an input impedance of
the main body, and λ is a wavelength of the high-frequency

signal on a transmission line; and

a resistor whose both ends are connected between the
90°-phase-difference generating circuit and the line
conductors, the resistance of the resistor being
5 substantially equal to $2 \times Z_2$.

3. The patch antenna according to Claim 2, wherein the
input impedance of the Wilkinson distribution circuit is
about 50 Ω , the characteristic impedance of each of the line
10 conductors is about 70 Ω , and the resistance of the resistor
is about 100 Ω .

4. The patch antenna according to Claim 1, wherein the
90°-phase-difference generating circuit and the Wilkinson
15 distribution circuit are provided on a lower surface of a
circuit board, which is fixed to a lower surface of the
ground electrode of the main body in a laminating manner,
upper ends of two feeding pins which extend through the
dielectric substrate and the circuit board are connected to
20 the feeding points, and lower ends of the two feeding pins
are connected to the output terminals of the 90°-phase-
difference generating circuit.